



25 Frame Plunger Pump

Standard Model

2530

Nickel Aluminum Bronze Model

2537

FEATURES

Superior Design

- Triplex plunger design gives smoother fluid flow.
- Hi-Pressure Seals are completely lubricated and cooled by the fluid being pumped.
- Inlet and discharge valve assemblies interchange for easier maintenance.
- Lubricated Lo-Pressure Seals provide double protection against external leakage.
- Oil bath crankcase assures optimum lubrication.
- Close tolerance concentricity of the ceramic plunger maximizes seal life.

Quality Materials

- All stainless steel valves are heat treated and seats are roller burnished for a positive seal and extended valve life.
- Brass or Nickel Aluminum Bronze manifolds are strong and corrosion resistance.
- Special concentric, high density, polished, graphite impregnated, solid ceramic plungers are abrasion resistant and result in extended seal life.
- Specially formulated, CAT PUMP exclusive, Hi-Pressure Seal offers unmatched performance and seal life.
- Die cast aluminum crankcase provides high strength, minimum weight and precision tolerance control.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity mean longer bearing life.

Easy Maintenance

- Wet end is easily serviced without entering crankcase, requiring less time and effort.
- Preset packings mean no packing gland adjustment is necessary, reducing maintenance costs.

SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|---------------------|-----------------|----------------|
| Flow | .21 GPM | (80 L/M) |
| Pressure Range..... | 100 to 1200 PSI | (7 to 85 BAR) |
| RPM | 914 RPM | (914 RPM) |

ALTERNATE SPECIFICATION - 2530 ONLY

| | | |
|---------------------|-----------------|---------------|
| Flow..... | .25 GPM | (95 L/M) |
| Pressure Range..... | 100 to 1000 PSI | (7 to 70 BAR) |
| RPM | 1088 RPM | (1088RPM) |

COMMON SPECIFICATIONS

| | | |
|---------------------------------|----------------------|----------------------|
| Maximum Inlet Pressure..... | Flooded to 70 PSI | (Flooded to 4.9 BAR) |
| Bore..... | 1.260" | (32 mm) |
| Stroke..... | 1.516" | (38.5 mm) |
| Crankcase Capacity | .84 oz. | (2.5 L) |
| Maximum Fluid Temperature | 160°F | (71°C) |
| Inlet Ports (2) | 1-1/4" NPT | (1-1/4" NPT) |
| Discharge Ports (2) | 3/4" NPT | (3/4" NPT) |
| Pulley Mounting | Either Side | (Either Side) |
| Shaft Diameter | 1.181" | (30 mm) |
| Weight..... | .82 lbs. | (37.1 kg) |
| Dimensions..... | 19.09 x 15.04 x 7.8" | (485 x 382 x 198 mm) |

HORSEPOWER REQUIREMENTS

| | FLOW | | PRESSURE | | | RPM |
|------|----------|-----|----------|----------|----------|------|
| | U.S. GPM | L/M | PSI 800 | PSI 1000 | PSI 1200 | |
| | | | BAR 55 | BAR 70 | BAR 85 | |
| 2530 | 25 | 95 | 13.7 | 17.2 | — | 1088 |
| 2530 | 21 | 80 | 11.5 | 14.4 | 17.3 | 914 |
| 2537 | 18 | 68 | 9.9 | 12.3 | 14.8 | 783 |
| | 15 | 57 | 8.2 | 10.3 | 12.4 | 652 |

See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 03.

| | | | |
|--------------------------------------|---|---|---|
| DETERMINING THE PUMP R.P.M. | $\frac{\text{Rated G.P.M.}}{\text{Rated R.P.M.}}$ | = | $\frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$ |
| DETERMINING THE REQUIRED H.P. | $\frac{\text{GPM} \times \text{PSI}}{1460}$ | = | Electric Brake H. P. Required |
| DETERMINING MOTOR PULLEY SIZE | $\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}}$ | = | $\frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$ |

Note: Consult engine manufacturer when using gas or diesel engine. Refer to pump Service Manual for important Inlet Condition Check-List, Start-up Procedure, Tech Bulletins and Pump Maintenance information.

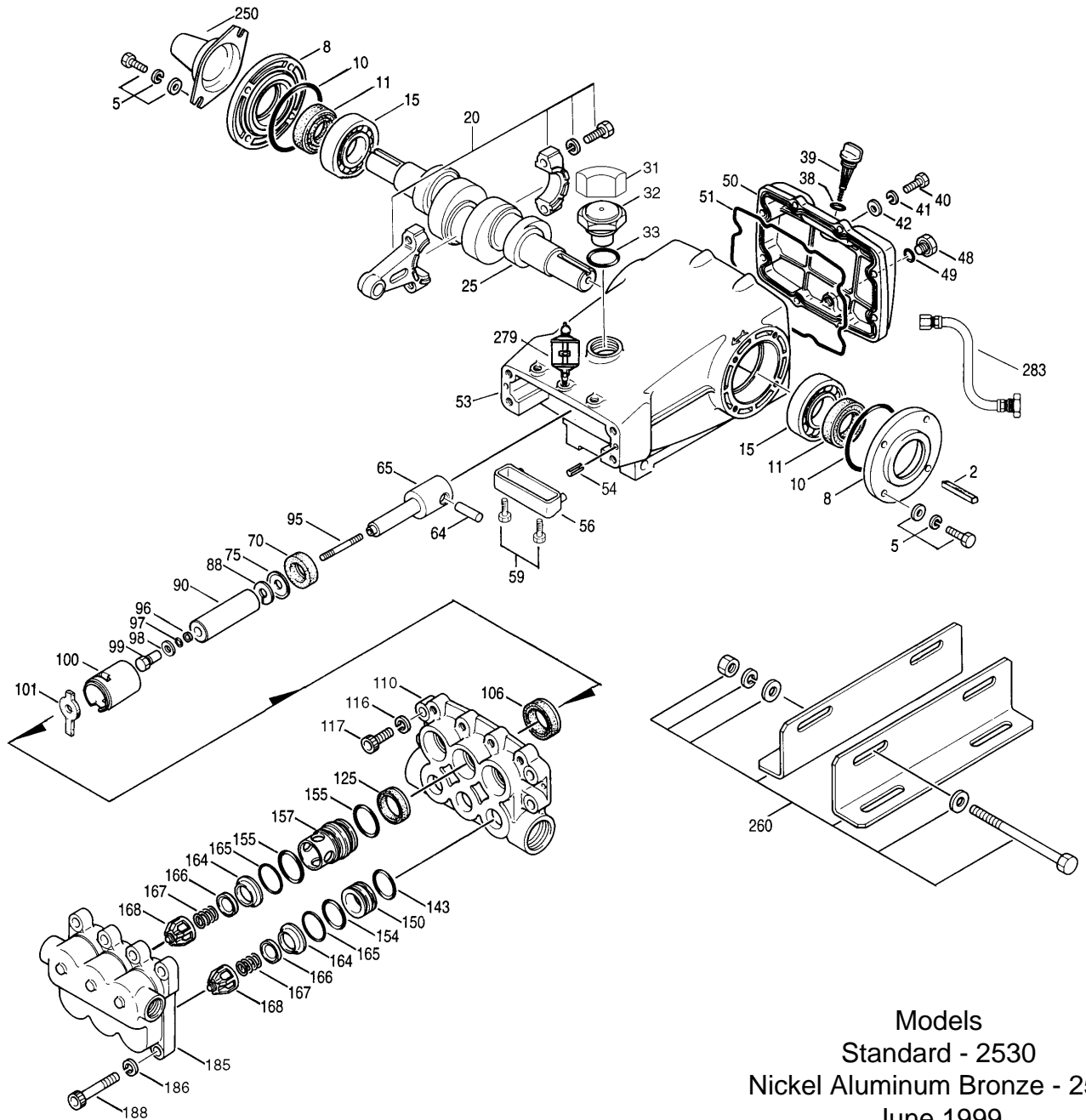
"Customer confidence is our greatest asset"

PARTS LIST

| ITEM | PART NUMBER | | DESCRIPTION | | QTY |
|-------|-------------|-------------|-------------|-------------|-----|
| | 2530 | MATL | 2537 | MATL | |
| ● 2 | 50146 | STL | 50146 | STL | 1 ● |
| 5 | 92508 | STZP | — | — | 8 ● |
| 5 | — | — | 89277 | S | 8 |
| 6 | — | — | 15846 | S | 8 |
| 7 | — | — | 13534 | S | 8 |
| 8 | 27773 | AL | 27773 | AL | 2 |
| 10 | 27772 | NBR | 27772 | NBR | 2 |
| 11 | 27771 | NBR | 27771 | NBR | 2 |
| 15 | 26512 | STL | 26512 | STL | 2 |
| 20 | 27776 | ZZ | 27776 | ZZ | 3 |
| 25 | 27770 | FCM | 27770 | FCM | 1 |
| 31 | 828710 | | 828710 | | 1 |
| 32 | 43211 | | 43211 | | 1 |
| 33 | 14177 | NBR | 14177 | NBR | 1 |
| 38 | 11338 | NBR | 11338 | NBR | 1 |
| 39 | 27769 | ABS | 27769 | ABS | 1 |
| 40 | 92508 | STZP | — | — | 8 |
| 40 | — | — | 89277 | S | 8 |
| 41 | — | — | 15846 | S | 8 |
| 42 | — | — | 13534 | S | 8 |
| 48 | 25625 | STCP | 25625 | STCP | 1 |
| 49 | 23170 | NBR | 23170 | NBR | 1 |
| 50 | 27768 | AL | 27768 | AL | 1 |
| 51 | 27767 | NBR | 27767 | NBR | 1 |
| ● 53 | 27762 | AL | 27762 | AL | 1 ● |
| 54 | 27488 | S | 27488 | S | 2 |
| 56 | 27790 | POP | 27790 | POP | 1 |
| 59 | 92519 | STZP | 92538 | S | 2 |
| 64 | 27784 | S | 27784 | S | 3 |
| 65 | 45828 | SSZZ | 45828 | SSZZ | 3 |
| 70 | 27785 | NBR | 27785 | NBR | 3 |
| 75 | 110669 | S | 110669 | S | 3 |
| 88 | 110670 | S | 110670 | S | 3 |
| 90 | 45749 | CC | 45749 | CC | 3 |
| 95 | 89835 | SS | 89835 | SS | 3 |
| 96 | 20184 | PTFE | 20184 | PTFE | 3 |
| 97 | 14190 | NBR | 14190 | NBR | 3 |
| | 14161 | FPM | 14161 | FPM | 3 |
| | ◆ 48239 | EPDM | ◆ 48239 | EPDM | 3 |
| 98 | 44069 | SS | 44069 | SS | 3 |
| 99 | 43946 | BB | 44068 | SS | 3 |
| 100 | 110672 | NY | 110672 | NY | 3 |
| 101 | 110677 | | 110677 | | 3 |
| 106 | 44098 | NBR | 44098 | NBR | 3 |
| | 44827 | FPM | 44827 | FPM | 3 |
| | ◆ 48244 | EPDM | ◆ 48244 | EPDM | 3 |
| ● 110 | 45750 | BB | 45830 | NAB | 1 ● |
| 116 | 30908 | STZP | 19085 | S | 4 |
| 117 | 89822 | STZP | 88398 | SS | 4 |
| 125 | 45832 | SNG | 45832 | SNG | 3 |
| | 48220 | STG | 48220 | STG | 3 |
| | 48220 | EPDM | 48220 | EPDM | 3 |
| 143 | 14203 | NBR | 14203 | NBR | 3 |
| | 11731 | FPM | 11731 | FPM | 3 |
| | ◆ 48241 | EPDM | ◆ 48241 | EPDM | 3 |
| 150 | 45752 | BB | 45835 | SS | 3 |
| 154 | 18690 | NBR | 18690 | NBR | 3 |
| | 11744 | FPM | 11744 | FPM | 3 |
| | ◆ 48242 | EPDM | ◆ 48242 | EPDM | 3 |
| 155 | 14520 | NBR | 14520 | NBR | 6 |
| | 11745 | FPM | 11745 | FPM | 6 |
| | ◆ 28240 | EPDM | ◆ 28240 | EPDM | 6 |
| 157 | 45751 | BB | 45834 | SS | 3 |
| 164 | 46857 | SS | 46857 | SS | 6 |
| 165 | 14014 | NBR | 14014 | NBR | 6 |
| | 48238 | FPM | 48238 | FPM | 6 |
| | ◆ 48243 | EPDM | ◆ 48243 | EPDM | 6 |
| 166 | 45839 | SS | 45839 | SS | 6 |
| 167 | 45840 | SS | 45840 | SS | 6 |
| 168 | 110682 | PVDF | 110682 | PVDF | 6 |
| ● 185 | 45753 | BBCP | 45836 | NAB | 1 ● |
| 186 | 30908 | STZP | 19085 | S | 8 |
| 188 | 89573 | STZP | 89628 | SS | 8 |
| 250 | 26516 | STCP | 26516 | STCP | 1 |
| 260 | 30614 | STZP | 30614 | STZP | 1 |
| ● 269 | 30206 | F | 30206 | F | 1 ● |

Pulley (9.75") [See Drive Packages, Tech Bulletin 03]

EXPLODED VIEW



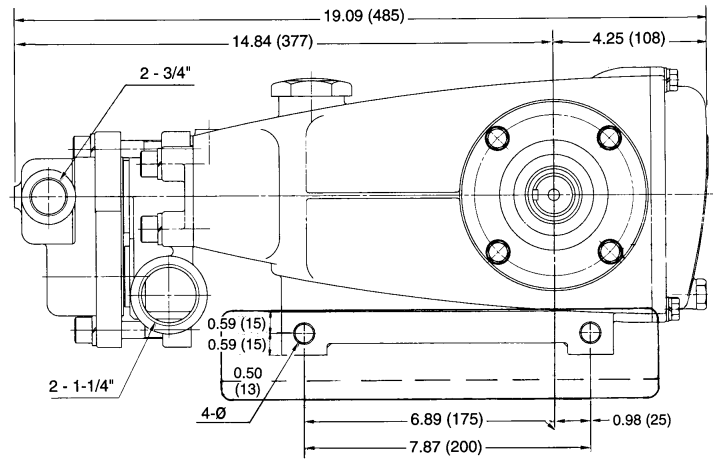
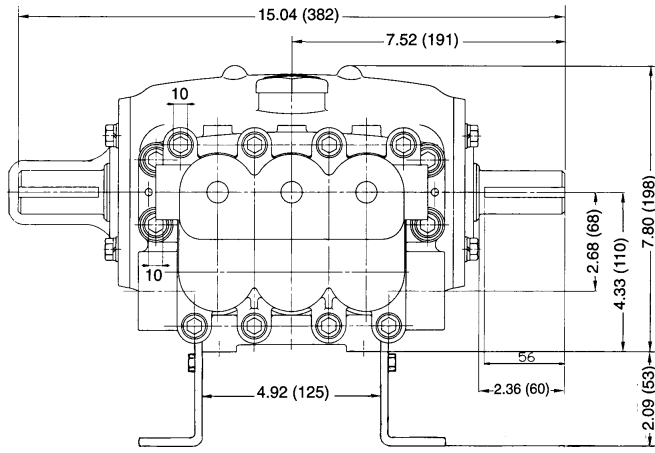
Models
Standard - 2530
Nickel Aluminum Bronze - 2537
June 1999

| | 2530 | MATL | 2537 | MATL | Description | Quantity | |
|-----|------|--------|------|---------|-------------|---|-----|
| ● | 270 | 30207 | STL | 30207 | STL | Hub, "H", M30 (Keyway M7) [See Drive Packages, Tech Bulletin 03] | 1 ● |
| ● | 279 | 30278 | STZP | 30278 | STZP | Oilers (1 oz.) | 3 ● |
| | 281 | 30967 | | 30967 | | Glass, Oiler | 1 |
| | 282 | 10069 | | 10069 | | Gasket, Oiler | 1 |
| ● | 283 | 34334 | | 34334 | | Kit, Oil Drain | 1 ● |
| ● | 290 | — | | 6108 | | Gasket, Liquid (1.5 oz.) | 1 ● |
| ● | 299 | — | | 816538 | | Head, Complete | 1 ● |
| | 300 | 30952 | NBR | 30952 | NBR | Kit, Seal (Incls: 97, 106, 125, 143, 154, 155) | 1 |
| | | 33607 | FPM | 33607 | FPM | Kit, Seal (Incls: 97, 106, 125, 143, 154, 155, 165) | 1 |
| ◆ | | 33608 | EPDM | ◆ 33608 | EPDM | Kit, Seal (Incls: 97, 106, 125, 143, 154, 155, 165) | 1 |
| 310 | | 33952 | NBR | 33952 | NBR | Kit, Valve (Incls: 143, 154, 164, 166, 167, 168, 165) [Prior to 11/95 all 6 Req.] | 2 |
| | | 31267 | FPM | 31267 | FPM | Kit, Valve (Incls: 143, 154, 164, 166, 167, 168, 165) [Prior to 11/95 all 6 Req.] | 2 |
| | | 31268 | EPDM | 31268 | EPDM | Kit, Valve (Incls: 143, 154, 164, 166, 167, 168, 165) [Prior to 11/95 all 6 Req.] | 2 |
| ● | — | 714500 | SS | 714500 | SS | C.A.T. (For R.O. or Industrial Applications) | 1 ● |
| ● | — | — | — | — | — | Adapter (2 per C.A.T.) (See Data Sheet for complete selection) | 2 ● |
| — | — | 6565.2 | | 6565.2 | | Video | 1 |

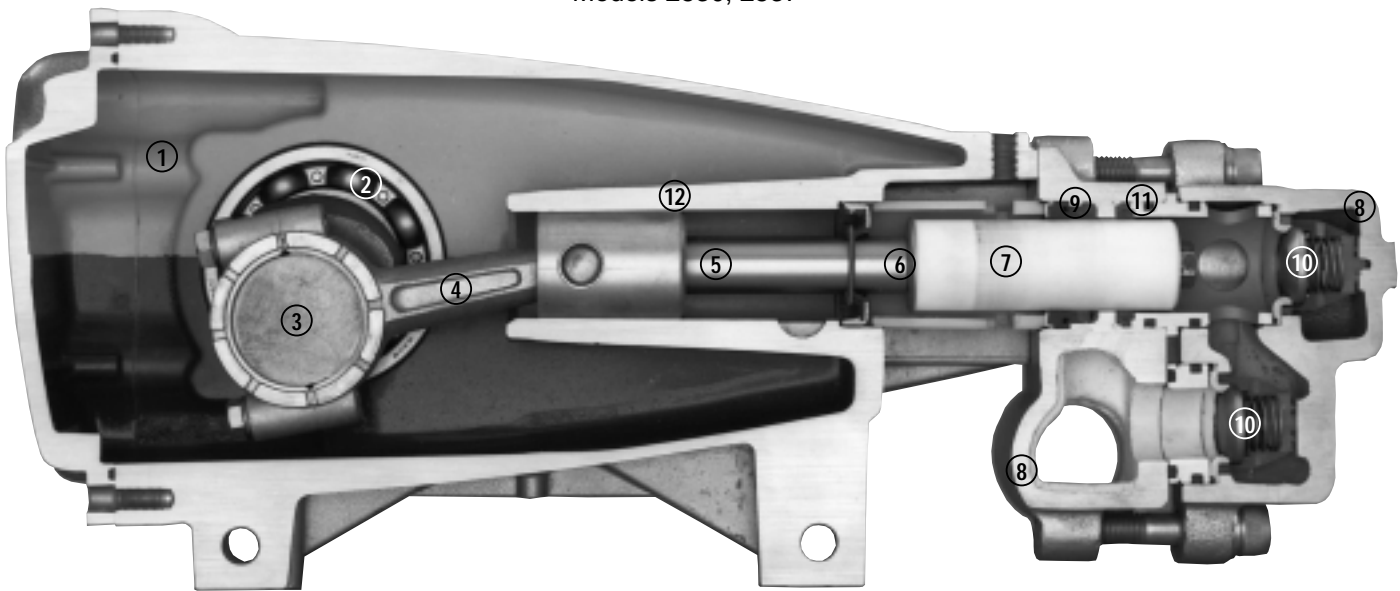
● Industrial discount. **Bold print part numbers are unique to a particular pump model.** *Italics are optional items.* ◆ Silicone oil/grease required.

See Tech Bulletins 03, 24, 36, 43, 53, 74, 76 and 77 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass BBBCP=Brass/Chrome Plated EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FCM=Forged Chrome-moly FPM=Fluorocarbon (Viton®) NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N) NY=Nylon POP=Polypropylene PTFE=Polytetrafluoroethylene (Teflon®) PVDF=Fluoroplastic (High Strength) S=304SS SNG=Special Blend (Buna) Black SS=316SS STCP=Steel/Chrome Plated STG=Special Blend (Teflon®) White STL=Steel STZP=Steel/Zinc Plated SSZZ=316SS/Zamak ZZ=Zamak



Models 2530, 2537



- 1 Die cast aluminum **crankcase** means high strength, light weight, and excellent tolerance control.
- 2 Oversized crankshaft **bearings** provide extended bearing life and pump performance.
- 3 Chrome-moly **crankshaft** provides unmatched strength and surface hardness for long life.
- 4 Matched oversized **connecting rods** are made of Zamak, a material noted for strength and superior bearing quality.

- 5 The **plunger rods** are high tensile strength stainless steel with Zamak crossheads.
- 6 The stainless steel **slinger** provides back-up protection for the crankcase seal, keeping pumped fluids out of the crankcase.
- 7 Special concentric, high density, polished, graphite impregnated, solid ceramic **plungers** are abrasion resistant and result in extended seal life.
- 8 **Manifolds** are a high tensile strength brass or nickel aluminum bronze for long term, continuous duty.

- 9 100% wet **seal** design adds to service life by allowing pumped fluids to cool and lubricate on both sides.
- 10 Stainless steel **valves, seats and springs** provide corrosion-resistance, positive seating and long life.
- 11 Specially formulated, CAT PUMP exclusive, **Hi-Pressure Seals** offer unmatched performance and seal life.
- 12 **Crosshead** is 360° supported for uncompromising alignment.

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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